

PROCEEDINGS OF THE
ROYAL ENTOMOLOGICAL SOCIETY
OF LONDON

SERIES G. JOURNAL OF MEETINGS

VOLUME 22

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ORDINARY MEETING.

WEDNESDAY, 2ND OCTOBER, 1957, at 5.30 p.m.

AGENDA.

1. Confirmation of the Proceedings of the Ordinary Meeting held on 3rd July, 1957.
2. Recommendations of candidates for Fellowship. First reading.
3. Recommendations of candidates for Fellowship. Second reading.
4. Announcement of election of new Fellows.
5. Additions to the Library [see p. 33].
6. Admission of Fellows.
7. Exhibits.

Fellows are particularly requested to bring suitable exhibits to the Meetings even though it may not be possible to announce their intention to do so beforehand.

Note.—To avoid congestion in the Library and to enable exhibits to be displayed to greater advantage, a table has been placed in the meeting-room for this purpose. Fellows are asked to place their exhibits on this table, with a suitable explanatory note, as soon as possible on the afternoon of the meeting, so that they are available for inspection there before the meeting opens.

8. Communications.

1. Professor O. W. Richards.

Predacious insects on broom.

[ABSTRACT].

During the last three years a study (in conjunction with Dr. N. Waloff) has been made at the Imperial College Field Station, Silwood Park, of the Chrysomelid beetle, *Phytodecta olivacea* Forster, living on broom. Recently it has become clear that several species of Mirid bugs are of great importance in the destruction of the early stages of the beetle. A start has been made in developing a method of measuring the amount of predation by using a serological reaction to identify

the food of the predators. The Miridae of the genus *Orthotylus*, which are partly concerned, are also interesting because three close species with very similar habits all live together on broom.

2. Mr. J. Balfour-Browne.

Insects of the Glacial Period in Britain.

[ABSTRACT].

A glacial deposit at Upton Warren which has been dated by C^{14} analysis as being about 43,000 years old and which, stratigraphically, belongs to the maximum phase of the Wurm Glacial Period—The Irish Sea Glaciation—has proved to be exceptionally rich in insect remains. These comprise *Sialis*, Hemiptera, Trichoptera parasitic Hymenoptera, Diptera and at least 15 families of Coleoptera.

The fauna will be considered and the evidence to be derived from it regarding climatic conditions, and the bearing of this evidence on the origins of the British fauna will be discussed.

TEA will be served in the Library before the meeting.

NOTICES.

Provision of refreshments after Ordinary Meetings.

It has been decided to discontinue the service of coffee and biscuits after Ordinary Meetings.

Forthcoming Ordinary Meetings.

6th November, 1957.

Mr. R. C. Fisher.—A re-investigation of flightlessness in the Coleoptera of Madeira.

4th December, 1957.

Exhibits and brief communications.—As in previous years, this meeting will be devoted to small exhibits of special interest requiring only short explanations.

PROCEEDINGS OF THE ORDINARY MEETING HELD ON 3RD JULY, 1957.

Mr. PAUL FREEMAN, Vice-President, in the Chair.

Present, 59 Fellows and 16 Visitors.

Before the meeting opened, the Vice-President read the following statement from the President:

"I am very grateful to Fellows for the numerous expressions of sympathy that have been conveyed to me. Although now much better, I am being sent away for a change of air and must therefore miss one more meeting. As far as can be humanly foreseen, I shall not miss any more."

The Vice-President extended a welcome to Mr. S. Husain and Dr. M. A. Rubb, from Pakistan; Mr. H. P. Saxena, from India; Mr. A. B. Dingayan, Mr. R. M. Labadan and Mr. M. A. Tolentino, from the Philippines; Dr. E. Haaf, from the Frey Museum, Bavaria; Mr. H. Hoogstraal, of the U.S. Navy Medical Research Unit, Cairo; and Dr. Willis W. Wirth, from Washington.

The minutes of the Ordinary Meeting held on 5th June were confirmed and signed by the Vice-President.

The names of the following candidates for election were read for the first time : Dr. Robert Barrass, B.Sc., Ph.D. ; Mr. William Noel Beesley ; Dr. Raymond Foster ; Mr. Brian McCullough Gerard ; Mr. Peter John Kingsley-Heath ; Mr. Joseph Maurice McManus ; Dr. Bhup Kishore Tandan, M.Sc., Ph.D. ; Professor Vasco M. Tanner, Ph.D. ; and Mr. Robert Octave Stewart.

For the second time (taken as read) : Dr. Judson Linsley Gressitt, Ph.D. ; Dr. Delfa Guiglia ; Mr. Ian Robert Harrison ; Mr. Syed Imam Hossain Kazi ; Mr. Mohammad Abdul Khaleque ; Mr. Khushi Muhammad Khalid, B.Sc. ; Mr. Ahmadullah Khan, B.Sc. ; Mr. Leonard Philip Lefkovitch, B.Sc. ; Mr. Syed Abdul Munim ; Mr. Peter J. S. Olney, B.Sc. ; Mr. Ahmed Abdur Rahim, B.Sc. ; Dr. Arthur Harold Bruce Rydon, L.R.C.P., M.R.C.S. ; Mr. Prakash Sarup, M.Sc. ; Mr. Krishnamoorti Satyanarayana ; Mr. Fazal Rahim Shaikh, B.A. ; Mr. Hajee Shareef, B.Sc. ; Mr. Don Quintus Suriaratchie ; Mr. Arthur Woods, M.A. ; and Mr. Kurukulaarachchige Don Marceline Blandy Nanayakkara Wijegooneratne.

The Secretary read the names of the following newly elected Fellows of the Society : Dr. John Philip Glasgow, E.A.T.R.O., Shinyanga, Tanganyika Territory ; Mr. George Anderson Hugh McClelland, B.A., E.A. Virus Research Institute, P.O. Box 49, Entebbe, Uganda ; Mr. Suvendu Kumar Majumder, M.Sc., Central Food Technological Research Institute, Mysore, U.P., India ; Mr. Nalkur Bhavani Shankar Rao, Pest Control (India) Private Ltd., 36 Yusuf Building, Mahatma Gandhi Road, Fort, Bombay, India ; Mr. Michael Thomas Tanton, "Normandy," Lichfield Road, Dunstall, Burton-on-Trent, Staffs. ; and Mr. Stanley Wood, B.Sc., 59 Effingham Road, Surbiton, Surrey.

Thanks were voted to donors of gifts to the Library since the last meeting.

Major A. E. Collier, Mr. L. Hender and Dr. B. McMillan signed the Obligation Book and were admitted Fellows of the Society.

The Honorary Secretary, on behalf of **Mr. D. G. Sevastopulo**, made the following communication arising out of the exhibit made by the Hon. Miriam Rothschild at the meeting on 6th April (*Proc. R. ent. Soc. Lond.* (C) 22 : 14) :

"I think that all the large Sphingids have tibial spurs strong, and sharp enough to inflict pricks on the soft skin of the inside of the fingers. I have experienced pricks when handling the following : *Herse convolvuli* L. ; *Coelonia fulvinotata* Btlr. ; *Xanthopan morgani* Wlk. ; *Deilephila nerii* L. ; *Euchloron megarera* L. The pricking usually occurs when the insect is struggling to escape and the middle and hind legs endeavour to lever the moth forward by pressing against the inside of the fingers."

Dr. H. E. Hinton exhibited electron micrographs of the plastron of the spiracular gill of the pupa of *Simulium ornatum* Meig. and said that the pupal gills of the Deuterophlebiidae, Blepharoceridae, and at least some Hemerodromiinae (Empididae) also had a plastron. In the pharate adult stage of the Simuliidae a muscle in the body of the adult operates the regulatory apparatus of the pupal spiracle. A slide was shown illustrating how this is done.

Dr. P. T. Haskell enquired whether the muscle was functional and, if so, what sense organ controlled the function when the adult is enclosed in the pupal skin, to which Dr. Hinton replied that the muscle was actually in the adult and is affected by the carbon dioxide concentration in the body.

Dr. M. T. Gillies exhibited some autoradiographs of *Aedes aegypti* labelled with radioisotopes. The examples shown were from mosquitoes labelled with Phosphorus-32 and Sulphur-35 respectively. By using two layers of X-ray film, the

"soft" beta-rays from S-35 are filtered off by the top layer of film so as to leave no image on the under layer. On the other hand, the "hard" rays from P-32 go straight through both layers and cause marked blackening of both.

It is suggested that this might be used as a simple method for distinguishing mosquitoes labelled with different isotopes under field conditions. By this means one need not wait for an area to be clear of insects from a previous release before marking and releasing the next batch.

In reply to an enquiry by Mr. P. Freeman as to how the captures were counted, Dr. Gillies said they were spread on film and left overnight and the images on the film then counted.

Mr. P. F. Mattingly gave a paper on an important problem of mosquito nomenclature. This concerned *Aedes aegypti* L., the name commonly applied to the yellow fever mosquito. An abstract of the paper appeared on page 23.

In the discussion which followed, Mr. H. L. G. Stroyan said that the proposal to fix the name *aegypti* by attaching it to a neotype which had nothing to do with the species Linnaeus described set a dangerous precedent. Mr. Mattingly replied that he was sympathetic to this point of view but in this particular case, where an enormous medical literature had grown up and the name was familiar to and in common use among workers in, and associated with, medical entomology, no other method would meet the case. Mr. Stroyan mentioned that the name *Stegomyia fasciata* had been used for this insect, to which Mr. Mattingly replied that this name was now pre-occupied. If another name were considered, the most suitable one would be *Aedes argenteus*, but he felt sure it just would not get itself "accepted" and the International Commission now encouraged the conservation of very familiar names. Mr. Stroyan said he rather deprecated this sacrificing of the rules to the medical profession; many similar cases had arisen in the aphids, and the rules of nomenclature had always been followed, apparently without undue inconvenience. In any case, it would take a considerable time for the proposed application to go through.

Dr. Hobby supported the views expressed by Mr. Stroyan.

Mr. Mattingly replied that the application to the Commission would be supported by the information in his paper and it would be open to anyone to object.

Dr. J. R. Busvine said that he agreed with the proposed action and quoted an analogous case concerning the naming of insecticides which had come before the British Standards Institution. The use of initial letters of chemical names was not permitted, but an exception had to be made in the case of D.D.T. He agreed with Mr. Mattingly that the present case was also one of those where principles had to be set aside.

Mr. Mattingly remarked, in reply to an enquiry by Mr. Leston, that nothing was standing over the name *aegypti* in the Linnean Collection. Mr. Leston referred to a similar problem in the case of the Tarnished Plant Bug, *Lygus pratensis*. There were four specimens in the Linnean Collection, two on modern and two on very old pins; one of the latter was unrecognisable and so was selected as the type. Mr. Mattingly added that in the case of *aegypti* there was no doubt what Linnaeus described.

Mr. R. C. B. Hartland-Rowe gave a paper on the biology of a tropical mayfly, *Povilla adusta* Navas, an abstract of which appeared on page 24.

A short discussion followed, in which Dr. D. J. Lewis asked why it was necessary for the larva to be in a tube for the filter feeding mechanism to work.

Mr. Hartland-Rowe replied that the brushes project at right angles to the body and if the larva were not in a tube the water would flow round the brushes.

Dr. Hickin remarked that it seemed strange that in *Povilla*, where the silk lined tube was so important to them, the larvae left the case, and he wondered how they found their way back. Mr. Hartland-Rowe replied that he was not sure they did return to their cases—it was possible they spun new ones. He did not know why they left them, but moonlight was responsible for the lunar rhythm and if the larvae remained permanently in their burrows, the light would not be sufficient to affect them.

In reply to an enquiry by Mr. G. F. Burnett, the speaker said he understood the larvae had been taken outside their burrows, although he had not done so himself.

Dr. H. E. Hinton enquired what was the threshold of light intensity which caused them to emerge. Mr. Hartland-Rowe replied that they could not detect a very dim light. He also said that the peak of emergence was always the same, irrespective of the phase of the moon.

E. B. BRITTON, *Honorary Secretary*.

The next meeting will be held on 6th November at 5.30 p.m.

ADDITIONS TO THE LIBRARY.

Presented.

- Blackwelder, R. E. Check-list of the Coleopterous insects of Mexico, Central America, the West Indies and South America. Pt. VI. *Bull. U.S. nat. Mus.* **185**: 927–1492. 1957. [Smithsonian Institution.]
- [Borkhsenius, N.S.] *Homoptera* IX. *Suborder Coccoidea. Fam. COCCIDAE*. 8vo. Moscow & Leningrad. 1957. [Fauna of U.S.S.R. (N.S.) **66**.] [Academy of Sciences of U.S.S.R., by exchange.]
- British Museum (Natural History). *A monograph of the immature stages of African timber beetles (CERAMBYCIDAE)*. By E. A. J. Duffy. 8vo. London, 1957. [The Trustees of the British Museum.]
- British Museum (Natural History). *A revision of the Australian Chafers (Coleoptera: SCARABAEIDAE: MELOLONTHINAE)*. By E. B. Britton. Vol. 1. 8vo. London, 1957. [The Trustees of the British Museum.]
- Bulletin of the California Insect Survey. 8vo. Berkeley & Los Angeles. Vol. 4, no. 4. *California wasps of the genus Oxybellus (Hym.: SPHECIDAE, CRABRONINAE)*. By R. M. Bohart and E. I. Schlinger. 1957. Vol. 4, no 5. *The thrips of California*. 1. *Suborder Terebrantia*. By S. F. Bailey. 1957. [University of California Press.]
- Hoogstraal, Harry. *African Ixodoidea*. 1. *Ticks of the Sudan*. 4to. Washington, 1956. [Navy Dept., Bureau of Medicine & Surgery, Washington.]
- [Luk'ianovich, F. K. and Ter-minasian, M. E.] *Coleoptera*. XXIV, no. 1. BRUCHIDAE. 8vo. Moscow & Leningrad, 1957. [Fauna of U.S.S.R. (N.S.) **67**.] [Academy of Sciences of U.S.S.R. By exchange.]
- Miller, D. *Bibliography of New Zealand entomology 1775–1952*. 8vo. Nelson, 1956. [Bull. N.Z. Dep. Sci. industr. Res. **120**.] [Entomology Division, D.S.I.R., New Zealand.]

- Seevers, C. H. A monograph on the termitophilous STAPHYLINIDAE (Col.). *Fieldiana* (Zool.) **40**: 1-334, 1957. [The Director, Chicago Natural History Museum.]
- Trojan, P. *Klucze do oznaczania owadów Polski*. XXVIII. *Diptera*. 1. *wstępny*. 8vo. Warszawa, 1957. [Polski Związek Entomologiczny. Nr. 20. serii kluczy.] [The Publishers.]

Purchased.

- Gomez Menor, J. *Las tribus de Hemipteros de España*. 8vo. Madrid: Trab. Inst. Ent., 1956.
- Hagan, H. R. *Embryology of the viviparous insects*. 8vo. New York: Ronald Pr. Co., 1951.
- Hering, E. M. *Bestimmungstabellen der Blattminen von Europa*. Bd. 1 & III. 8vo. s'-Gravenhage: W. Junk, 1957.
- McGregor, E. A. *The mites of citrus trees in Southern California*. 8vo. Berkeley & Los Angeles, 1956. [Mem. S. Calif. Acad. Sci. **3** (3).]
- Poisson, R. *Hétéroptères aquatiques*. 8vo. Paris: Lechavalier, 1957. [Faune de France, **61**.]
- Stichel, W. *Illustrierte Bestimmungstabellen der Wanzen*. II. *Europa*. (Hemiptera-Heteroptera Europae) Hft. 19; Vol. 4, hft. 2. 8 vo. Berlin-Hermsdorf, 1957.
- Usinger, R. L. ed. *Aquatic insects of California*. [Contributors W. C. Bentinck & 15 others.] 8vo. Berkeley & Los Angeles: Univ. California Pr., 1956.
- Wu, Chenfu F. *Catalogus insectorum sinensium*. Vols. 5 & 6. 8vo. Peiping: Fan Memorial Inst. of Biology; Dept. of Biology Yenching University, 1940-41.
- Young, F. N. *The water beetles of Florida*. 8vo. Gainesville: Univ. of Florida Pr., 1954.

In addition, separates have been presented by the United States Department of Agriculture; Mr. C. N. Smithers; Dr. H. C. Cleu; the Director, National Museum of Wales; Anti-Locust Research Centre; West African Cocoa Research Institute, Tafo; Dr. J. L. Cloudsley-Thompson; Dr. D. J. Lewis; Dr. J. T. Salmon; Mr. A. Neboiss; British Museum (Natural History); Mr. E. B. Britton; East African Virus Research Institute, Entebbe; Mr. D. K. McE. Kevan; Mr. R. M. Gambles; Mr. W. C. Day; East Malling Research Station; Commonwealth Institute of Entomology; Professor J. Lane; Mr. W. J. Le Quesne; Dr. A. K. Wafa; The Director, Laboratory of Entomology, Wageningen; Mr. Francis Hemming, C.M.G., C.B.E.; Smithsonian Institution; Mr. B. L. Sage; Mr. N. D. Riley, C.B.E.; Dr. D. E. Owen; Dr. J. D. Bletchly; Mr. R. S. George; American Entomological Society; Mr. J. E. Knight; Department of Entomology, University of Queensland; Dr. C. M. Biezanko; Freshwater Biological Association; Mr. J. Phipps; Hope Department of Entomology; Rothamsted Experimental Station; The Director, Carnegie Museum; Mr. T. C. E. Thomas; Professor D. S. Bertram; Mr. H. E. Hammond and Mr. K. G. V. Smith.